Amendments to the claims

Please amend the claims as follows:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A transgenic mouse comprising: a first transgenic nucleotide sequence, integrated into the genome of said mouse, comprising a sequence encoding a wild type or 751 amino acid isoform (hAPP751) human amyloid precursor protein (hAPP) operably linked to a first promoter; and a second transgenic nucleotide sequence, integrated into the genome of said mouse, comprising a sequence encoding a wild type human (h) α-synuclein operably linked to a second promoter; wherein the first and second transgenic nucleotide sequences are expressed, the first and the second promoter comprises a neuron-active promoter, and ~~wherein,~~ as a result of [[said]] expression of the hAPP and (h) α-synuclein, said transgenic mouse develops amyloidosis, neurofibrillary tangles or intraneuronal accumulation of (h) α-synuclein ~~neurodegenerative disease~~.

Claim 2 (original): The transgenic mouse of claim 1, wherein said first promoter comprises a platelet-derived growth factor β (PDGF-β) promoter.

Claim 3 (original): The transgenic mouse of claim 2, wherein a simian virus (SV)40 derived intron operably links said PDGF-β promoter to said first transgenic nucleotide sequence.

Claim 4 (original): The transgenic mouse of claim 1, wherein said first promoter comprises a Thy1 promoter.

Claim 5 (original): The transgenic mouse of claim 1, wherein said first promoter comprises a prion (PrP) promoter.

Claim 6 (original): The transgenic mouse of claim 1, wherein said first promoter comprises a PDGF-β promoter.

Claim 7 (original): The transgenic mouse of claim 6, wherein a SV40 derived intron operably links said PDGF-β promoter to said second transgenic nucleotide sequence.

Claim 8 (original): The transgenic mouse of claim 1, wherein said second promoter comprises a Thy1 promoter.

Claim 9 (original): The transgenic mouse of claim 1, wherein said second promoter comprises a PrP promoter.

Claim 10 (original): The transgenic mouse of claim 1, wherein said second promoter comprises a PDGF-β promoter.

Claim 11 (original): The transgenic mouse of claim 10, wherein a SV40 derived intron operably links said PDGF-β promoter to said second transgenic nucleotide sequence.

Claim 12 (previously presented): The transgenic mouse of claim 1, wherein proteins encoded by the first and second transgenic nucleotide sequences are overexpressed as compared to levels of equivalent proteins encoded by a non-transgenic mouse of the same strain.

Claim 13 (previously presented): The transgenic mouse of claim 1, wherein the nucleotide coding sequence of hAPP comprises an intron between exons 6 through 9 of the hAPP-encoding sequence.

Claim 14 (original): The transgenic mouse of claim 1, wherein the nucleotide sequence encoding hAPP encodes hAPP770.

Claim 15 (original): The transgenic mouse of claim 1, wherein the nucleotide sequence encoding hAPP encodes hAPP751.

Claim 16 (original): The transgenic mouse of claim 1, wherein the nucleotide sequence encoding hAPP encodes hAPP695.

Claim 17 (previously presented): The transgenic mouse of claim 1, wherein the hAPP is a mutant hAPP, wild type or a truncated form of hAPP.

Claim 18 (previously presented): The transgenic mouse of claim 17, wherein the nucleotide sequence encoding the mutant hAPP encodes a protein that comprises a change from lysine to asparagine at amino acid 670 and a change from methionine to leucine at amino acid 671.

Claim 19 (previously presented): The transgenic mouse of claim 17, wherein the nucleotide sequence encoding the mutant hAPP encodes a protein that comprises a change from valine to isoleucine at amino acid 717.

Claim 20 (previously presented): The transgenic mouse of claim 17, wherein the nucleotide sequence encoding the mutant hAPP encodes a protein that comprises a change from valine to phenylalanine at amino acid 717.

Claim 21 (original): The transgenic mouse of claim 1, wherein the nucleotide sequence encoding hAPP encodes only a portion of hAPP.

Claim 22 (original): The transgenic mouse of claim 21, wherein hAPP is $A\beta_{1-42}$.

Claim 23 (previously presented): The transgenic mouse of claim 1, wherein the nucleotide sequence of α-synuclein comprises a wild type coding sequence of α-synuclein.

Claim 24 (previously presented): The transgenic mouse of claim 1, wherein the h α-synuclein is a mutant or a truncated form of h α-synuclein.

Claim 25 (previously presented): The transgenic mouse of claim 24, wherein the nucleotide sequence encoding the mutant h α-synuclein encodes a protein that comprises a change from alanine to proline at amino acid 30.

Claim 26 (previously presented): The transgenic mouse of claim 24, wherein the nucleotide sequence encoding the mutant h α-synuclein encodes a protein that comprises a change from alanine to threonine at amino acid 53.

Claim 27 (currently amended): A transgenic mouse comprising: a first transgenic nucleotide sequence, integrated into the genome of said mouse, comprising a sequence encoding a human amyloid precursor protein (hAPP) operably linked to a platelet derived growth factor β (PDGF-β) promoter operably linked to a simian virus (SV) 40 intron; a second transgenic nucleotide sequence, integrated into the genome of said mouse, comprising a sequence encoding a human (h) α-synuclein operably linked to a PDGF-β promoter operably linked to an SV40 intron; wherein the first and second transgenic nucleotide sequences are expressed, and ~~wherein,~~ as a result of [[said]] expression of the hAPP and (h) α-synuclein, said transgenic mouse develops amyloidosis, neurofibrillary tangles or intraneuronal accumulation of (h) α-synuclein ~~neurodegenerative disease~~.

Claim 28 (original): The transgenic mouse of claim 27, wherein proteins encoded by the first and second transgenic nucleotide sequences are overexpressed as compared to a non-transgenic mouse of the same strain.

Claim 29 (previously presented): The transgenic mouse of claim 27, wherein the hAPP coding sequence comprises a coding sequence comprising an intron between exons 6 through 9.

Claim 30 (previously presented): The transgenic mouse of claim 27, wherein the hAPP comprises a mutation of valine to isoleucine at amino acid 717.

Claim 31 (previously presented): The transgenic mouse of claim 27, wherein hα-synuclein coding sequence comprises a truncated coding sequence of hα -synuclein.

Claim 32 (original): The transgenic mouse of claim 27, wherein neurodegenerative disease comprises formation of intraneuronal inclusions characteristic of Lewy body disease.

Claim 33 (original): The transgenic mouse of claim 27, wherein neurodegenerative disease comprises formation of fibrillary Lewy body-like inclusions.

Claim 34 (original): The transgenic mouse of claim 27, wherein neurodegenerative disease comprises neuronal death.

Claim 35 (original): The transgenic mouse of claim 27, wherein neurodegenerative disease comprises development of motor deficits.

Claim 36 (previously presented): The transgenic mouse of claim 27, wherein age of onset of the neurodegenerative disease occurs at a significantly ($p<0.05$) younger age than in a singly transgenic (having only one of either the first or the second transgene) littermates.

Claim 37 (withdrawn - currently amended): A method for screening therapeutic agents for the prevention or treatment of neurological disease comprising administration of therapeutic interventions to a transgenic mouse comprising: a first transgenic nucleotide sequence, integrated into the genome of said mouse, encoding human amyloid precursor protein (hAPP) operably linked to a first promoter; a second transgenic nucleotide sequence, integrated into the genome of said mouse, encoding human (h) α-synuclein operably linked to a second promoter; wherein the first and second transgenic nucleotide sequences are expressed, the first and the second promoter comprises a neuron-active promoter, and ~~wherein,~~ as a result of [[said]] expression of the hAPP and (h) α-synuclein, said transgenic mouse develops amyloidosis, neurofibrillary tangles or intraneuronal accumulation of (h) α-synuclein ~~neurodegenerative disease~~.

Claim 38 (currently amended): A transgenic mouse comprising: a first transgenic nucleotide sequence, integrated into the genome of said mouse, comprising a sequence encoding a 751 amino acid isoform hAPP751 or a wild type human amyloid precursor protein (hAPP) operably

linked to a first promoter; and a second transgenic nucleotide sequence, integrated into the genome of said mouse, comprising a sequence encoding a human (h) α-synuclein operably linked to a second promoter; wherein the first and second transgenic nucleotide sequences are expressed, the first and the second promoter comprises a neuron-active promoter, and ~~wherein,~~ as a result of [[said]] expression of the hAPP and (h) α-synuclein, said transgenic mouse develops ~~intraneuronal~~ accumulation of α-synuclein, amyloidosis or neurofibrillary tangles.

Claim 39 (withdrawn - currently amended): A method for screening for an agent for the prevention or treatment of intraneuronal accumulation of α-synuclein, amyloidosis or neurofibrillary tangles, comprising

(a) providing a potential therapeutic agent;

(b) administering the potential therapeutic agent of (a) to the [[a]] transgenic mouse of ~~as set forth in~~ claim 38; and

(c) determining whether because of the administering of the potential therapeutic agent in (b) intraneuronal accumulation of α-synuclein, amyloidosis or neurofibrillary tangles in the transgenic mice is prevented or slowed.

Claim 40 (currently amended): A method of making a transgenic mouse comprising:

(a) integrating into the genome of a mouse a sequence comprising a 751 amino acid isoform hAPP751 or a wild type human amyloid precursor protein (hAPP)- encoding nucleic acid operably linked to a first promoter; and

(b) integrating into the genome of the mouse a sequence comprising a human (h)α-synuclein-encoding nucleic acid operably linked to a second promoter,

wherein the first and the second promoter comprises a neuron-active promoter.

Claim 41 (previously presented): A transgenic mouse strain made by the method of claim 40.

Claim 42 (previously presented): A transgenic mouse strain made by propagating the mice of claim 41.

Claim 43 (new): A transgenic mouse strain made by propagating the transgenic mice of claim 1.